CHILDREN'S WELLBEING AND DEVELOPMENT OUTCOMES FOR AGES 5, 7 AND 11, AND THEIR PREDICTORS

Report Commissioned by Public Health England

Executive Summary

AUTHORS

(Listed Alphabetically)

Mireia Borrell-Porta (Post-Doctoral Researcher, Department of Social Policy, Oxford University)

Kerris Cooper (Doctoral Researcher, Department of Social Policy, LSE)

Joan Costa Font (Associate Professor of Political Economy and Social Policy, LSE)

Chiara Orsini (Post-Doctoral Researcher and Visiting Researcher, Social Policy, LSE)

Berkay Ozcan* (Assistant Professor of Social Policy, LSE)

Lucinda Platt [+] (Professor of Social Policy and Sociology, LSE)

*Team leader. [+] Senior Advisor

Scope and Approach

— This report sheds light on those factors associated with child outcomes across multiple domains of their lives: health, cognition and education, behaviour and social relationships. It covers these outcomes across children in England's early years up to the end of primary school, using the Millennium Cohort Study. It enhances our understanding of family and individual factors linked to positive child outcomes across these domains in a number of ways.

- First, by considering all four domains side by side, it enables an overview and direct comparison of the most relevant factors across these domains as well as those that are specific to particular outcomes.
- Second, it uses multiple indicators for each of the four outcome domains and investigates them at three ages, 5, 7 and 11.
- Third, the choice of potential factors linked to these outcomes was informed by a literature review which enabled us to select those most relevant to each particular outcome
- Fourth, the report is based on rigorous empirical analysis, which employs multiple tests for the robustness of the associations between our specified factors and the child outcomes.

Summary of Results

Overall we found a small number of highly robust relationships, many of which persisted across all three child ages. These are summarized for each indicator across the four outcome domains:

— **Health: BMI / overweight,**
  - Maternal weight before pregnancy and maternal BMI at age nine months were consistent predictors of higher BMI and of an increased risk of overweight.
  - While the effect sizes were not large once other factors were controlled for they were robust and persisted up to age 11, though maternal weight before pregnancy was a strong predictor only for girls.
  - Smoking during pregnancy was also associated with higher risks of overweight at ages 7 and 11, revealing the potential long-run impacts of pre-natal and early childhood behaviours.
  - While a range of other predictors were associated in some analyses and at some ages none of the other findings 'survived' all our additional tests.
— **Health: Self-Reported Child Health**
  - We found consistent negative effects on health of low birth weight and being of Pakistani or Bangladeshi ethnic origin.
  - Higher income was associated with better health at age 11.
  - Being picked on by other children or being bullied was consistently associated with worse health.
  - Again, a number of other variables were significant in some models and at certain ages, and so may have some policy relevance, but these other findings were not fully robust to all additional tests.

- **Cognitive (verbal and non-verbal tests, ages 5, 7, 11) and educational (KS2 (age 11) maths and English),**
  - We identified a female advantage in the age 5 verbal and non-verbal tests and for verbal tests at age7. But by age 11 this advantage in cognitive tests was no longer present. However, on KS2 scores, girls performed better in English and Reading and worse in maths and arithmetic. These findings were robust to our additional tests.
  - Having a mother who worked at age nine months had a consistently negative independent association with cognitive outcomes at ages 7 and 11, though interestingly not at age 5.
  - Similarly, low income had a consistent effect on cognitive outcomes at ages 7 and 11.
  - Maternal education mattered for all cognitive outcomes at all ages, with lower maternal education being associated with poorer cognitive outcomes. Maternal education was also associated with KS2 English and reading scores but, interestingly, not maths and arithmetic.
  - Breastfeeding up to 6 months was also robustly associated with all cognitive and educational outcomes at ages 7 and 11.
- **Behaviour: total difficulties; externalising and internalising problems, hyperactivity,**
  - Mother's mental health was negatively associated with all behavioural outcomes. Although the size of the effects is not large, the associations are highly consistent.
  - Maternal education was also significantly associated with total difficulties at all ages, while having more siblings was associated with fewer problems. Again these were highly consistent findings that survived the most stringent tests.

General conclusions

- The analysis shows how many factors that have a bearing on child outcomes are in fact interlinked.
- In addition, the findings demonstrate the importance of parental behaviours and family characteristics from early childhood - or even from before birth - for outcomes 6-10 years down the line.
- The findings reinforce some of the associations that were clear from the earlier PREview study, such as the importance of maternal mental health for behavioural outcomes and of maternal education and family income for a range of outcomes. They show that these associations persist from the very early years to the end of primary school.
- Finally, it is important to recognise that in many cases, even if the associations are clear-cut, they only go a small way to explaining the great diversity in outcomes across children. Children differ in multiple ways for reasons that we cannot capture, and even the strongest relationships are not deterministic.